

most challenging of circumstances. From 1973 to 1985 Captain Landers served with the surface and submarine fleets of the Atlantic and Pacific Oceans. He gained extensive experience aboard *USS ALEXANDER HAMILTON* (SSBN) 617, *USS VON STEUBEN* (SSBN) 632, and *USS PIGEON* (ASR 21). After serving on the staff of the Director of Strategic Systems Programs, Washington, DC, Captain Landers commanded the *USS ORTOLAN* (ASR 22) from 1987 to 1990. He subsequently became the Executive Assistant to the Deputy Chief of Naval Personnel. Captain Landers left the Navy Annex in 1994 and reported for duty at the Industrial College of the Armed Forces at Fort McNair where he received a Master of Science Degree in National Resource Strategy.

From 1995 to 1997, Captain Landers commanded the naval Submarine Base, Bangor, WA. He returned to the Pentagon in November 1997, where he served as the Deputy Chief of Legislative Affairs. In this capacity he has been a major asset to the Navy, Marine Corps and Congress. He is considered a valued advisor to the very top echelons of the Navy and Congress. His consummate leadership, energy and integrity ensured that the morale and effectiveness of the Navy-Marine Corps team reached heights otherwise thought to be impossible to achieve in such an austere budget climate. During a period of significant change and restructuring of naval forces, Captain Landers helped to obtain Congressional support for a strong and balanced navy and marine Corps. Through his brilliant insight, he has directly contributed to their future readiness and success.

Captain Landers' distinguished awards include the Legion of Merit with three gold stars, the meritorious Service medal with one gold star, the navy Commendation Medal with two gold stars and the navy Achievement Medal with one gold star.

The Department of the navy, the Congress, and the American people have been defended and well served by this dedicated naval officer for over 30 years. Captain Mike Landers will long be remembered for his leadership, service and dedication. He will be missed. We wish Mike, and his lovely wife Kris, our very best as they begin a new chapter in their life together.●

VERMONT'S SMALL BUSINESS PERSON OF THE YEAR

● Mr. LEAHY. Mr. President, today I rise to recognize two very special Vermont business people. Tom and Sally Fegley are the owners and founders of Tom and Sally's Handmade Chocolates of Brattleboro, Vermont. For the past two years I have been pleased to nominate Tom and Sally for the U.S. Small Business Administration's Small Business Person of the Year award for the state of Vermont. This year, I am proud to announce that Tom and Sally Fegley are the recipients of this prestigious award.

Eight and a half years ago, the Fegleys had the courage to move to Vermont and risk their lives' savings to undertake their start-up business in chocolates, a field in which neither of them had any previous experience. With hard work and intense dedication they have built this business to more than \$1 million in gross sales in 1997. Their products are sold in all fifty states and they are exported all over the world, including Canada, Great Britain, France, Germany, South Africa and the Netherlands. Tom and Sally's entrepreneurial savvy has helped to spread the distinctive high quality of Vermont specialty foods across the globe.

The Fegley's chocolates are so unique they have received five federal trademarks for their chocolates ranging from "Vermont Pasture Patties" to "Cowlicks." In addition, their products have won eight national awards and have received media coverage ranging from "Good Morning, America" and "The Today Show" to such magazines as *Bon Appetit*, *Fine Cooking*, and *Mademoiselle*, as well as newspapers including *The New York Times*, *The Wall Street Journal*, and *The Washington Post*.

I remember the first time that Marcelle and I visited Tom and Sally's shop in 1992. We were especially impressed with its old-fashioned atmosphere and Vermont country charm. A few years ago, Tom and Sally decided to combine the sale of their handmade chocolates and candies with the sale of Vermont folk art. This gallery displays the handicrafts of Vermonters as the Fegleys display the fruits of their own handicraft. This innovative combination makes visiting Tom and Sally's a unique and charming experience while promoting Vermont's distinct character.

Not only have Tom and Sally made an imprint on Vermont's specialty food industry, but they have made an even larger contribution to their community. Perhaps the Fegleys should be recognized more for what they do for others than for their business success. From donating chocolates to local charities, to helping a local apple orchard after vandals destroyed the apple trees, Tom and Sally's involvement and contributions have expanded beyond the business industry and have made them important members of Vermont's communities.

I am pleased that the Fegleys have been named 1998 Vermont Small Business Persons of the Year. I believe that they embody what Vermont is all about—a fine tradition of quality products with a strong sense of community.●

REMARKS BY SENATOR BILL FRIST TO THE ASSOCIATION OF AMERICAN UNIVERSITIES

● Mr. FRIST. Mr. President, on Tuesday, June 2nd, I addressed the Association of American Universities regard-

ing the importance of federal support for university-based research. I ask that my remarks be printed in the RECORD.

The remarks follow:

FEDERAL SUPPORT FOR UNIVERSITY-BASED RESEARCH HAS PRODUCED A WEALTH OF BENEFITS FOR ALL AMERICANS

As a medical scientist, a researcher, a former university faculty member, a current university Trustee, and a life-long explorer in the quest for new knowledge, I believe, as you do, that America's strategy of federally-supported university-based research has produced a wealth of benefits for all Americans.

It's not only expanded our scientific and academic national base, but increased the economic vitality of our Nation, raised the standard of living all Americans enjoy, and produced a highly-educated workforce that has made us a leader in today's global economy. In fact, in economic terms alone, the return on our federal investment has been huge. As much as one half of all U.S. growth is a result of the technical progress we've achieved through research.

According to the Office of Science and Technology Policy (OSTP), technology is the single most important factor in long-term economic growth. Not only is the performance of U.S. businesses and their contributions to economic growth directly linked to their use of technology, but as cited in a study conducted by the US Department of Commerce, manufacturing businesses that used eight or more advanced technologies grew 14.4 percent more than plants that used none—and production wages were more than 14 percent higher.

For any of you who may encounter doubters in other Congressional offices let me give you just two quick examples from the President of MIT, who testified before my committee, of how the federal investment in university research has produced phenomenal returns.

Over the last three decades, the Department of Defense has funded \$5 billion in university in information technology. Those programs alone created one-third to one-half of all major breakthroughs in the computer and communications industries. Today, those businesses account for \$500 billion of GDP—a return on our investment of 3,000 percent!

In fact, studies of just that one university along—MIT—found that, in Massachusetts, MIT grads and faculty founded over 600 companies that produced 300,000 jobs and \$40 billion in sales. In Silicon Valley, MIT grads founded 225 companies which produced 150,000 jobs and more than \$22 billion in sales.

In one industry alone—biotechnology—government's \$43 million annual investment has not only produced the human capital of the biotech industry—scientists, engineers, managers—and new knowledge that's led to an understanding of the molecular basis of disease, but it's also produced new companies and new wealth.

To again use MIT as an example, in Massachusetts alone, MIT-related companies have produced 10,000 new jobs, \$3 billion in annual revenues, and 100 new biotech patents licensed the U.S. companies that have induced investment of \$650 million. Those companies now produce nine of the 10 FDA-approved biotech drugs that stop heart attacks and treat cancer, cystic fibrosis and diabetes—and we've only just begun to tap the potential returns of this rapidly advancing new field.

And I'm sure every one of the universities you represent could cite statistics that are equally impressive.

But, as you well know, universities are not just the fountainhead of innovation. They

are the wellsprings that provide the intellectual underpinning of future progress, because they train the people who will translate tomorrow's discoveries into even more exciting products and processes and industries. And when you consider what today's students are already capable of, the potential is truly breathtaking.

Jennifer Mills, for example, is a physics undergraduate from Portland, Oregon who wrote much of the computer code responsible for the astounding images sent back to Earth by the Hubble telescope.

James McLurkin, an undergrad engineer, created a tiny robot that may well revolutionize certain kinds of surgery, enabling surgeons to operate inside the body without ever touching the patient! Just imagine what tomorrow's students do to!

AMERICA'S INVESTMENT IN SCIENCE AND TECHNOLOGY MUST CONTINUE

Clearly, America's investment in science and technology must continue. The two central questions that Congress must ask and answer, however, are: (1) Will science and technology continue to be as great a Congressional priority in the future as it has been in the past; and (2) Will the kind of financial investment necessary to sustain future progress even be possible in light of our other growing financial commitments?

The history of the last five decades has shown us that there is a federal role in the creation and nurturing of science and technology, and that even in times of fiscal austerity that commitment has been relatively consistent. However, the last three decades have also shown us something else: fiscal reality. The simple truth is there's just not enough money to do everything we'd like to do. It took some time for us to realize that, and by the time we did, we found ourselves in a fiscal situation that is only now being addressed. And, budget surpluses notwithstanding, discretionary spending is, and will continue to be, under immense fiscal pressure.

One only has to look back over the last 30 years to confirm this trend. In 1965, mandatory federal spending on entitlements and interest on the debt accounted for 30 percent of the federal budget. Fully 70 percent went toward discretionary programs—research, education, roads, bridges, national parks, and national defense.

Today, just 30 years later, that ratio has been almost completely reversed: 67 percent of the budget is spent on mandatory programs and interest on the debt; only 33 percent is left for absolutely everything else, including research.

In fact, total R&D spending today as a percentage of GDP is just .75 percent—as compared to 2.2 percent in the mid-1960s when superpower rivalry and the race to space fueled a national commitment to science and technology. And as the Baby Boom generation begins to retire and the discretionary portion of the budget shrinks even further, this situation will only grow worse.

Thus, we have both a long-term problem: addressing the ever-increasing level of mandatory spending; and a near-term challenge: apportioning the ever-dwindling amount of discretionary funding.

The confluence of this increased dependency on technology and decreased fiscal flexibility has created a problem too obvious to ignore: not all deserving programs can be funded; not all authorized programs can be fully implemented. In other words, the luxury of fully funding science and technology programs across the board has long since passed. We must set priorities.

VISION FOR THE FUTURE: HOW WE ENSURE FEDERAL SUPPORT FOR SCIENCE AND TECHNOLOGY

With the introduction of S.1305, the Federal Research Investment Act, * * * a debate

on funding for science and technology that is long overdue, and I commend them for it.

I firmly believe that Congress must reaffirm our national commitment to science and technology, and redouble its efforts to ensure that funding is not only maintained but increased. However, I also believe that funding levels alone are not the answer.

What we really need is a strategy for the future, a vision that not only provides adequate levels of funding, but ensures that that funding is both responsible and sustainable over the long term.

I believe we do that by establishing and applying a set of first or guiding principles that will enable Congress to (1) consistently ask the right questions about each competing technology program; (2) focus on that program's effectiveness and appropriateness for Federal funding, and most importantly, (3) make the hard choices about which programs deserve to be funded and which do not. Only then can we be assured that Congress has invested wisely and well.

What are these first principles? There are four.

(1) Federal R&D programs must be good science. They must be focused, not duplicative, and peer-reviewed. Because there is strength in diversity, they must support both knowledge-driven science—which broadens our base of knowledge and advances the frontiers of science; and mission-driven science requirements—which push the state-of-the-art in specific technology fields.

(2) Program must be fiscally accountable. Especially in today's fiscal environment, wasteful administrative habits can't be tolerated.

(3) They must have measurable results. Programs must achieve their aims. Their effectiveness must be evaluated, not on the basis of individual projects which can have varying rates of success, but on basis of the entire program.

(4) They must employ a consistent approach. Federal policy must be applied consistently across the entire spectrum of Federal research agencies. High quality, productive research programs must be encouraged regardless of where they are located.

Accompanying the four first principles, are four corollaries:

(1) *Flow of Technology.*—The process of creating technology involves many steps. However, the current federal structure clearly reinforces increasingly artificial distinctions across the spectrum of research and development activities. The result is a set of programs which each support a narrow phase of research and development, but are not coordinated with one another.

Government must maximize its investment by encouraging the progression of a technology from the earliest stages of research up to commercialization, through funding agencies and vehicles appropriate for each stage. This creates a flow of technology, subject to merit at each stage, so that promising technology is not lost in a bureaucratic maze.

(2) *Excellence in the American Research Infrastructure.*—We must foster a close relationship between research and education. Our investment at the university level creates more than simply world class research. It creates world class researchers as well. We must continue this strong research infrastructure, and find ways to extend the excellence of our university system to primary and secondary educational institutions.

(3) *Commitment to a Broad Range of Research Initiatives.*—Revolutionary innovation is taking place at the overlap of research disciplines. We must continue to encourage this by providing opportunities for interdisciplinary projects and fostering collaboration across fields of research.

(4) *Partnerships among Industry, Universities, and Federal Labs.*—Each of these has special talents and abilities that complement the other. Our federal dollars are wisely spent by facilitating the creation of partnerships, in effect creating a whole that is greater than the sum of its parts.

These first principles and their four corollaries provide a framework that will not only guide the creation of new, federally-funded research and development programs, but validate existing ones. Taken together, they create a powerful method for elevating the debate by increasing Congress' ability to focus on the important issues; decreasing the likelihood that it will get sidetracked on politically-charged technicalities; and ensuring that federal R&D programs are consistent and effective. They will also help us establish a both consistent set of national goals, and a vision for the future.

S. 1305: A GOOD FIRST STEP, BUT A MORE COMPREHENSIVE APPROACH IS NEEDED

S. 1305 has put funding for science and technology at the forefront of the 105th Congress. It is an important first step in the creation of a long-term federal research and development strategy, and I wholeheartedly support its general concept and thrust. However, I believe it falls short in many of the areas I have just outlined.

In S. 1305, funding levels are dramatically increased within the first five years regardless of economic conditions—making funding targets unrealistic and unsustainable, particularly when those funding levels jeopardize discretionary programs necessary to the maintenance and operation of the nation.

The bipartisan bill I will propose with Senator Rockefeller will also substantially increase funding but more gradually. Rather than achieve a doubling of funds in 10 years as S. 1305 proposes, the First bill will achieve the same goal in 12 years.

My bill also requires the President to provide, as part of his annual budget, a detailed summary of the total level of federal funding for all civilian research agencies, as well as a focused strategy that reflects the funding projections of Congress for each future fiscal year until 2010.

S. 1305 provides Congress with no mechanism to identify or target those programs that are either marginal or ineffective. In keeping with the third principle that all federal R&D programs must be fiscally accountable, my bill will include a mechanism that requires OMB to indicate those programs that fail to meet a minimally acceptable criteria as defined by a National Academy of Science study.

Finally, S. 1305 effects only civilian research and development programs, and provides no support for highly successful defense science and technologies efforts such as those under DARPA. And, as I demonstrated in my earlier example, defense-related research has produced remarkable spinoffs in the private sector, the Internet being the most obvious example. Thus, in a companion bill, I will propose a similar strategy for increasing funding for defense-related R&D.

Even with its imperfections, S. 1305 is already a success—because it has commenced a debate on science and technology investment that is long overdue. And it is a debate I am committed to furthering.

LEGISLATIVE UPDATE

Accordingly, I commenced a process, which continues daily, through which I hope to examine all relevant approaches, and collect and compile the input of all federal research agencies, the scientific community, my distinguished colleagues in Congress and government, and all other relevant parties in an effort to construct a comprehensive, feasible

and effective strategy for future federal funding of science and technology.

On April 28th, the Science, Technology, and Space Subcommittee which I chair, held a hearing to further explore the whole issue of federal funding, and three of the original cosponsors of S. 1305—Senators GRAMM, LIEBERMAN, and BINGAMAN—participated. Senator DOMENICI, who was unable to attend, submitted testimony for the RECORD.

At my direction, my personal chief of staff, and my Commerce Committee staff, have met extensively with professional societies, private industry, and university representatives, some of whom are here today, to get a clear sense of your reality, your vision of where research and development ought to be headed, and your reaction to both S. 1305 and a First alternative.

They've also been meeting with the senior legislative staffs of other Members to develop a strategy everyone is comfortable with, and that addresses everyone's primary concerns. And we've been meeting with House staff and coordinating our goals with those of the House Policy Study. The response has been very positive.

After comprehensive discussions my Senate colleagues have agreed to support a First alternative in which funding would rise from \$34 billion to \$68 billion. And all other parties seem to like the idea of a long-term vision, a concrete strategy to take us there (vs. rhetoric that is subject to change), and realistic numbers that stand a good chance of being achieved.

Your input into this process has been particularly important. Every time we meet, my staff and I gain a better understanding of the complexity of these issues as they relate to universities. And I hope you'll continue to work with us in the days ahead.

In the very near future, probably within a week or two, a Frist/Rockefeller bill, officially called the Federal Research Investment Act of 1998, will be dropped. It is a bill that represents—not a roadblock to increased federal funding for research—but a carefully-crafted compromise, agreed to by all, and representing the best efforts of all.

CHALLENGE OF THE FUTURE

Today, in every known field of exploration, man has answered questions once considered unanswerable, and questions impossible to even conceive just a short time ago. Yet so many mysteries remain. And so we must continue to seek, to define, to know.

Yet science today is not only about the esoteric, it's about the practical. It's about the simple as well as the deep. It is both a luxury and a necessity. Science helps us feed our families. It helps keep our loved ones healthy. By continually creating new goods and services, new jobs and new capital, it raises our standard of living. And it produces the technologies that protect our troops and project our resolve around the world. In other words, science has helped keep us prosperous, and science has helped keep us free.

Without a doubt, science is an integral part of our present. But because we live in a world now dependent upon science and technology excellence, a world driven by a science and technology economy, science is even more important to our future.

To a large extent, universities hold the key to that future because universities guide America's youth and inspire them to seek out the deep truths of life, to lift the veil from its fascinating secrets, to seek, to define, to know. It is the University that fosters a love for the mysteries of God and nature, and propels the next generation forward to explore and improve our world. And that makes you a vital link between the present and the future.

We are—and we should be—justly proud of our scientific accomplishments thus far. But

if there is one thing science has taught us, it is that man's challenges only increase with every new level of knowledge we achieve. Which is why continued research and development is so important.

Expanding scientific knowledge is a responsibility that extends well beyond the classrooms and universities of our Nation. It is the responsibility of us all. As John F. Kennedy said, "Every educated citizen has the special obligation to encourage the pursuit of learning, to promote exploration of the unknown, to preserve the freedom of inquiry, [and to] support the advancement of research . . ."

I take his words seriously. I know you do as well. Working together, I believe we can ensure that American commitment to research and scientific inquiry continues unabated in the years ahead.●

HONORING THE RETIREMENT OF COLONEL MARY TRIPP

● Ms. MOSELEY-BRAUN. Mr. President, it is my privilege to say a few words in honor of a native Illinoisan, Colonel Mary Tripp, who retired from the United States Air Force on June 1, 1998 after 23 years of proud service to our nation.

Colonel Tripp's final assignment in the Air Force was director of the program honoring the 50th anniversary of the service. The project was a blend of motivational and historic information, which under Colonel Tripp's direction both informed the general public and energized her fellow airmen. From the national recognition at the Tournament of Roses Parade to the Pentagon Cake Cutting Ceremony with President Clinton, the hard work and dedication of Colonel Tripp shined in every event. The distinguished history of the United States Air Force is a story every American should know. Under Colonel Tripp's direction, this story was told. Through the example Colonel Tripp set as an officer during her career, the Air Force's proud legacy will continue to grow.

As Colonel Tripp returns to private life in West Chicago, Illinois, I ask my colleagues to join me in commending her outstanding service to our nation, and wish her good luck and Godspeed in all of her future endeavors.●

RECOGNITION OF "FATHER'S MONTH"

● Mr. BOND. Mr. President, I rise today to recognize the new tradition of "Father's Month" in St. Louis, Missouri founded by Mayor Clarence Harmon. Being a father myself, I know the important role that a father's nurturing can make in a child's life. A father's influence can help a child grow into a healthy, happy, well-adjusted adult.

The purpose of "Father's Month" will be to encourage the community to actively work toward a common goal of fathers who take a larger role in the development of their children. I agree with Mayor Harmon that merely providing financial support is not enough. With the continuing efforts of St. Louis to promote events that teach

positive family values and family togetherness, there is no telling how much the community can achieve. I offer Mayor Harmon and the community of St. Louis support and gratitude during "Father's Month."●

REMEMBERING THE LIFE AND COMMITMENT OF ROBERT F. KENNEDY ON THE 30TH ANNIVERSARY OF HIS DEATH

● Mr. CLELAND. Mr. President, I rise today to honor the memory of one of our Nation's most compassionate and visionary leaders, Robert F. Kennedy, who was assassinated 30 years ago. He served our nation as Attorney General and United States Senator, but his impact on our nation's history cannot be measured by mere titles or the offices he held.

Although his life was cut short thirty years ago, his legacy will live on forever. Many of today's leaders were inspired by Bobby Kennedy—he inspired me to become involved in politics more than three decades ago. I had the privilege to meet Bobby Kennedy in the summer of 1965 at Stetson University. Shaking his hand forever changed my life. Now today in the Senate my desk is very close to his old desk on the Senate floor—close enough to always remind me of why I first got involved in politics.

Bobby Kennedy's philosophy was truly admirable. Bobby Kennedy was committed to equal opportunity for all. He displayed ceaseless devotion to the impoverished members of the American community, and pushed for decent wages and adequate healthcare for all. He knew the importance of protecting the well-being of our youth, and he fought to improve their education. Throughout his life, he worked toward a more just society.

His tragic death shocked and saddened the hearts of America. I was recovering from my injuries from Vietnam in Walter Reed Hospital the day I heard of his tragic death. I am sure many others have a similarly clear recollection of that day. We had lost a committed, warmhearted leader who we would never forget or replace.

Mr. President, I ask that you and my colleagues join me in remembering this admirable and courageous leader, who forever changed the history of this nation. Thirty years later, his memory and legacy live on. We continue to remember Robert F. Kennedy for his passion, courage and devotion, and will always do so.●

TRIBUTE TO AARON LOPEZ: NEW HAMPSHIRE'S 1998 STATE YOUTH OF THE YEAR 1998

● Mr. SMITH of New Hampshire. Mr. President, I rise today to congratulate Aaron Lopez of Nashua, NH. Aaron was recently named the New Hampshire State Youth of the Year by the Boys and Girls Clubs of America.

The Youth of the Year program, in its 51st year, recognizes outstanding